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 FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 10:38:52 ON 09 MAY 2005
L1          1727 S APTAMER
L2          6490 S RAMACHANDRA?/AU
L3        107479 S EXPRESSION (S) ( VECTOR OR PLASMID OR CONSTRUCT OR ELEMENT)
L4         13929 S E@F-1 OR GAL4 OR "TET REPRESSOR" OR KRAB OR ZF5 OR WT1 OR SFI
L5         15834 S E2F-1 OR GAL4 OR "TET REPRESSOR" OR KRAB OR ZF5 OR WT1 OR SFI
L6             1 S L1 AND L3 AND L5
L7         40882 S "GENE REGULATION"
L8         40886 S "GENE REGULATION" OR "MODULATEING GENE EXPRESSION" OR "APTAME
L9            14 S L1 AND L8
L10            0 S L9 NOT PY >=2001
L11            8 DUP REM L9 (6 DUPLICATES REMOVED)
L12           39 S GOTTESMAN?/AU AND "DSRA"
L13           20 DUP REM L12 (19 DUPLICATES REMOVED)
L14           11 S L13 NOT PY>=2001
L15            0 S L14 AND APTAMER
L16            0 S L14 AND L3
L17            1 S L14 AND L8
L18            3 S L2 AND L1
L19            1 DUP REM L18 (2 DUPLICATES REMOVED)
L20            3 S L1 (P) L5
L21            1 DUP REM L20 (2 DUPLICATES REMOVED)
L22            7 S P53 AND L1
L23            4 DUP REM L22 (3 DUPLICATES REMOVED)
L24           17 S L3 (P) L1
L25            4 S L24 NOT PY>=2001
L26            2 DUP REM L25 (2 DUPLICATES REMOVED)
L27       198733 S GREEN?/AU OR WERSTUCK?/AU
L28           18 S L27 AND L1
L29           16 S L28 NOT PY>=2001
L30            9 DUP REM L29 (7 DUPLICATES REMOVED)
L31          318 S L27 AND L8
L32            0 S L31 AND L1
L33            9 S L31 AND LIGAND
L34            3 DUP REM L33 (6 DUPLICATES REMOVED)
L35            0 S L1 AND L27 AND L5

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L11 ANSWER 1 OF 8 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2005138456 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15769877
TITLE: Molecular analysis of a synthetic tetracycline-binding riboswitch.
AUTHOR: Hanson Shane; Bauer Gesine; Fink Barbara; Suess Beatrix
CORPORATE SOURCE: Lehrstuhl fur Mikrobiologie, Fried-rich-Alexander-Universitat Erlangen-Nurnberg, Staudtstrasse 5, 91058 Erlangen, Germany.
SOURCE: RNA (New York, N.Y.), (2005 Apr) 11 (4) 503-11.
Journal code: 9509184. ISSN: 1355-8382.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200504
ENTRY DATE: Entered STN: 20050317
Last Updated on STN: 20050426
Entered Medline: 20050425

AB Riboswitches are newly discovered regulatory elements that consist solely of RNA, sense their ligand in a preformed binding pocket, and perform a conformational switch in response to ligand binding, resulting in altered gene expression. Regulation by a tetracycline (tc)-binding **aptamer** when inserted into the 5' untranslated region (UTR) of a reporter gene exhibits all characteristics of a riboswitch. Chemical and enzymatic probing reveals that the **aptamer** consists of two stems, P1 and P2, which are already present in the absence of tc and form the scaffold of the **aptamer**. They are separated by a bulge B1-2 and an opposing stem-loop (P3-L3). Tc-dependent changes in the probing pattern only appear in the upper part of the bulge B1-2 (nucleotides 9-13) and the loop L3. Saturating mutagenesis corroborates the involvement of these two regions in regulation. Structural probing of the mutant A55U, which contains a single-nucleotide exchange in loop L3 results in a changed probing pattern of the loop, but also of the opposing bulge B1-2. This denotes that both regions cooperate and form a composite binding pocket. Thus, our model for **aptamer-mediated** translational regulation is that the ligand-free **aptamer** has only marginal influence on translational initiation. Tc then leads to an intramolecular connection in a pseudoknot-like manner and turns the **aptamer** into its inhibitory form. This represents a new mechanism for riboswitch action clearly distinguished from currently known naturally occurring riboswitches, which function by sequestration of the ribosomal binding site, transcriptional attenuation, and ribozyme-mediated degradation.

L11 ANSWER 2 OF 8 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2005088603 EMBASE
TITLE: Engineering regulatory RNAs.
AUTHOR: Davidson E.A.; Ellington A.D.
CORPORATE SOURCE: A.D. Ellington, Inst. for Cell. and Molec. Biology, University of Texas at Austin, Austin, TX 78712, United States. andy.ellington@mail.utexas.edu
SOURCE: Trends in Biotechnology, (2005) Vol. 23, No. 3, pp. 109-112.
Refs: 21
ISSN: 0167-7799 CODEN: TRBIDM
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20050310
Last Updated on STN: 20050310

AB RNA has long been a favoured medium for in vitro evolution and engineering. Functional RNAs produced in vitro can bind small molecules (aptamers), possess catalytic activity (ribozymes) or do both (aptazymes). A plethora of recent work has shown similar strategies used naturally for

gene regulation in bacteria. Interest in these natural systems has inspired an effort to engineer and evolve this activity in vivo. A recent paper by Isaacs et al. describes the engineering and in vivo activity of a small RNA that removes translation inhibition by binding the 5' untranslated region of its target mRNA and making the ribosome-binding site accessible.

L11 ANSWER 3 OF 8 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 2

ACCESSION NUMBER: 2004204127 EMBASE
TITLE: Probing TBP interactions in transcription initiation and reinitiation with RNA aptamers that act in distinct modes.
AUTHOR: Fan X.; Shi H.; Adelman K.; Lis J.T.
CORPORATE SOURCE: J.T. Lis, Dept. of Molec. Biology and Genetics, Cornell University, Biotechnology Building, Ithaca, NY 14853, United States. jtl10@cornell.edu
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (4 May 2004) Vol. 101, No. 18, pp. 6934-6939.
Refs: 30
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040610
Last Updated on STN: 20040610

AB The TATA-binding protein CTBP) is a critical general transcription factor that associates with the core promoter and acts as a nexus for **gene regulation** through its interactions with other factors. A large number of proteins recognize the relatively small yet highly conserved C-terminal domain of TBP. One subset of these proteins (general transcription factors) interacts with the TBP-TATA complex and RNA polymerase II to create the preinitiation complex. To study TBP functions in preinitiation complex and other complexes, we generated a set of RNA aptamers with high affinity to yeast TBP. These aptamers act on TBP in different ways: all of them bind TBP competitively with DNA bearing the TATA element and some can actively disrupt the TBF-TATA interaction in preformed, higher-order complexes containing the additional general transcription factors TFIIB and TFIIA. In crude cell extracts, the aptamers inhibit transcription in ways that reveal the dynamic nature of TBP interactions during initiation and reinitiation.

L11 ANSWER 4 OF 8 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 2004418740 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15324817
TITLE: Engineering a ligand-dependent RNA transcriptional activator.
COMMENT: Comment in: Chem Biol. 2004 Aug;11(8):1031-2. PubMed ID: 15324802
AUTHOR: Buskirk Allen R; Landrigan Angela; Liu David R
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford Street, Cambridge, Massachusetts 02138, USA.
SOURCE: Chemistry & biology, (2004 Aug) 11 (8) 1157-63.
Journal code: 9500160. ISSN: 1074-5521.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200502
ENTRY DATE: Entered STN: 20040825
Last Updated on STN: 20050216
Entered Medline: 20050214

AB RNA has recently been shown to play diverse roles in **gene regulation**, including the small molecule-dependent inhibition of translation in prokaryotes. To create an artificial genetic switch that acts at the level of transcription, we fused a small molecule binding

aptamer to a previously evolved RNA that activates transcription when localized to a promoter. We designed a conformational shift in which a helical element required for transcriptional activation was stabilized upon ligand binding. Selection and screening in S. cerevisiae optimized the linker region, generating an RNA that is 10-fold more active in the presence of tetramethylrosamine (TMR). TMR increases the activity of this evolved RNA in a graded, dose-dependent manner. Our results exemplify a strategy for controlling the activity of laboratory-evolved RNAs in living cells.

L11 ANSWER 5 OF 8 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2004350965 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15254757
TITLE: Targeting Ku protein for sensitizing of breast cancer cells to DNA-damage.
AUTHOR: Zhang Li; Yoo Sunghan; Dritschilo Anatoly; Belyaev Igor; Soldatenkov Viatcheslav
CORPORATE SOURCE: Department of Radiation Medicine, Lombardi Cancer Center, Georgetown University, Medical Center, Washington, DC 20057, USA.
CONTRACT NUMBER: 2P30-CA-51008 (NCI)
SOURCE: International journal of molecular medicine, (2004 Aug) 14 (2) 153-9.
Journal code: 9810955. ISSN: 1107-3756.
PUB. COUNTRY: Greece
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200503
ENTRY DATE: Entered STN: 20040716
Last Updated on STN: 20050305
Entered Medline: 20050304

AB Targeting molecular components that are critically involved in the maintenance of genome stability is a promising approach for overcoming intrinsic tumor cell resistance to DNA-damaging treatments. In mammalian cells, the Ku-dependent non-homologous end-joining repair pathway is the predominant process for the repair of double-strand breaks (DSBs) in DNA. Previously, RNA aptamers were selected to efficiently block DNA-binding activity of the Ku protein in vitro. In the present study, we have tested the efficacy of RNA aptamers against the Ku protein as molecular sensitizer of MCF-7 breast carcinoma cells to DNA-damage. Toward this end, we established MCF-7 cell sublines stably expressing SC4 **aptamer** RNAs under the control of the human 7SL small nuclear RNA gene promoter. Vector-transfected (MCF/7SL) cells and cells stably expressing SC4 aptamers (MCF/SC4) were exposed to the anticancer drug etoposide and cellular responses to DNA-damage were evaluated. We found that the presence of RNA aptamers against Ku protein enhanced etoposide-induced growth inhibition of MCF-7 breast cancer. The SC4 **aptamer-mediated** sensitization of MCF-7 cells to the anticancer drug is attributable to an increased susceptibility of these cells to apoptosis. The observed effects cannot be accounted for by the differential expression levels of Ku protein in control and SC4 **aptamer**-expressing cells, but are rather due to augmented DNA binding-capacity of Ku protein, as demonstrated in in vitro studies. Thus, RNA aptamers against Ku protein show potential to sensitize MCF-7 breast carcinoma cells to DNA-damaging agents.

L11 ANSWER 6 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:411432 BIOSIS
DOCUMENT NUMBER: PREV200400407697
TITLE: Ocular delivery of angiostatic agents.
AUTHOR(S): Lu, Ming [Reprint Author]; Adamis, Anthony P.
CORPORATE SOURCE: Massachusetts Eye and Ear Infirm, 243 Charles St, Boston, MA, 02114, USA
SOURCE: International Ophthalmology Clinics, (Summer 2004) Vol. 44, No. 3, pp. 41-51. print.
ISSN: 0020-8167.
DOCUMENT TYPE: Article
LANGUAGE: English

ENTRY DATE: Entered STN: 20 Oct 2004
Last Updated on STN: 20 Oct 2004

L11 ANSWER 7 OF 8 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2003454847 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12950926
TITLE: Tetracycline-**aptamer-mediated** translational regulation in yeast.
AUTHOR: Hanson Shane; Berthelot Karine; Fink Barbara; McCarthy John E G; Suess Beatrix
CORPORATE SOURCE: Lehrstuhl fur Mikrobiologie, Friedrich-Alexander Universitat Erlangen-Nurnberg, Staudtstrasse 5, 91058 Erlangen, Germany.
SOURCE: Molecular microbiology, (2003 Sep) 49 (6) 1627-37. Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200312
ENTRY DATE: Entered STN: 20031001
Last Updated on STN: 20031218
Entered Medline: 20031211

AB We describe post-transcriptional **gene regulation** in yeast based on direct RNA-ligand interaction. Tetracycline-dependent translational regulation could be imposed via specific aptamers inserted at two different positions in the 5' untranslated region (5'UTR). Translation in vivo was suppressed up to ninefold upon addition of tetracycline. Repression via an **aptamer** located near the start codon (cap-distal) in the 5'UTR was more effective than repression via a cap-proximal position. On the other hand, suppression in a cell-free system reached maximally 50-fold and was most effective via a cap-proximal **aptamer**. Examination of the kinetics of tetracycline-dependent translational inhibition in vitro revealed that preincubation of tetracycline and mRNA before starting translation led not only to the fastest onset of inhibition but also the most effective repression. The differences between the behaviour of the regulatory system in vivo and in vitro are likely to be related to distinct properties of mRNP structure and mRNA accessibility in intact cells as opposed to cell-extracts. Tetracycline-dependent regulation was also observed after insertion of an uORF sequence upstream of the **aptamer**, indicating that our system also targets reinitiating ribosomes. Polysomal gradient analyses provided insight into the mechanism of regulation. Cap-proximal insertion inhibits binding of the 43S complex to the cap structure whereas start-codon-proximal aptamers interfere with formation of the 80S ribosome, probably by blocking the scanning preinitiation complex.

L11 ANSWER 8 OF 8 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004278987 EMBASE
TITLE: Group I aptazymes as genetic regulatory switches.
AUTHOR: Thompson K.M.; Syrett H.A.; Knudsen S.M.; Ellington A.D.
CORPORATE SOURCE: A.D. Ellington, Department of Chemistry/Biochemistry, Inst. for Cellular/Molecular Biology, University of Texas at Austin, Austin, TX 78712, United States. andy.ellington@mail.utexas.edu
SOURCE: BMC Biotechnology, (4 Dec 2002) Vol. 2, pp. 12p. Refs: 43
ISSN: 1472-6750 CODEN: BBMIE6
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040715
Last Updated on STN: 20040715

AB Background: Allosteric ribozymes (aptazymes) that have extraordinary activation parameters have been generated in vitro by design and selection. For example, hammerhead and ligase ribozymes that are

activated by small organic effectors and protein effectors have been selected from random sequence pools appended to extant ribozymes. Many ribozymes, especially self-splicing introns, are known control **gene regulation** or viral replication in vivo. We attempted to generate Group I self-splicing introns that were activated by a small organic effector, theophylline, and to show that such Group I aptazymes could mediate theophylline-dependent splicing in vivo. Results: By appending aptamers to the Group I self-splicing intron, we have generated a Group I aptazyme whose in vivo splicing is controlled by exogenously added small molecules. Substantial differences in **gene regulation** could be observed with compounds that differed by as little as a single methyl group. The effector-specificity of the Group I aptazyme could be rationally engineered for new effector molecules. Conclusion: Group I aptazymes may find applications as genetic regulatory switches for generating conditional knockouts at the level of mRNA or for developing economically viable gene therapies.

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S105	3817	aptamer or aptamers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S106	722185	expression vector or expression construct	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S107	100554	activator or repressor or cofactor	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S108	347	antibiotic with ligand	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S109	580	(aptamer or aptamers) and (transcription with (activator or repressor or cofactor))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S110	579	(expression vector or expression construct) and ((aptamer or aptamers) and (transcription with (activator or repressor or cofactor)))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S111	26	((expression vector or expression construct) and ((aptamer or aptamers) and (transcription with (activator or repressor or cofactor)))) and (Hoechst with "33258")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S112	4	((expression vector or expression construct) and ((aptamer or aptamers) and (transcription with (activator or repressor or cofactor)))) and (antibiotic with ligand)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S113	149307	regulatory protein	USPAT	OR	OFF	2005/04/25 11:41
S114	1815865	s (regulatory protein) and transcription	USPAT	OR	OFF	2005/04/25 11:41
S115	33877	(regulatory protein) and transcription	USPAT	OR	OFF	2005/04/25 11:41
S116	35	((regulatory protein) with transcription) same (aptamer or aptamers)	USPAT	OR	OFF	2005/04/25 11:41
S117	1666046	small molecule-RNA interactions	USPAT	OR	OFF	2005/04/25 11:41
S118	936	(small molecule-RNA interactions) and (aptamer or aptamers)	USPAT	OR	OFF	2005/04/25 11:41

S119	14	((small molecule-RNA interactions) and (aptamer or aptamers)) and (Hoechst with "33258")	USPAT	OR	OFF	2005/04/25 11:41
S120	153394	transcription regulatory protein	USPAT	OR	OFF	2005/04/25 11:41
S121	989	(transcription regulatory protein) and (aptamer or aptamers)	USPAT	OR	OFF	2005/04/25 11:41
S122	987	((transcription regulatory protein) and (aptamer or aptamers)) and (GAL4 or STAT or E2F-1 or DNA binding domain or DNA binding motif)	USPAT	OR	OFF	2005/04/25 11:41
S123	681729	translation switch	USPAT	OR	OFF	2005/04/25 11:41
S124	66	(aptamer or aptamers) same (translation switch)	USPAT	OR	OFF	2005/04/25 11:41
S125	413	ramachandra.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S126	3817	aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S127	5	ramachandra.in. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S128	66302	"gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S129	259324	translation$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S130	1223634	activat$ or repress$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S131	27243	e2f-1 or gal4 or stat or "Zinc finger"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S132	6492	tup1 or sir1 or nep1 or tsf3 or sfI or sf1 or wt1 or e4bp4 or krab or zf5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S133	141411	ligand	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S134	5	ramachandra.in. and (ramachandra. in. and aptamer)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S135	12	ramachandra.in. and "gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S136	2154	aptamer and "gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S137	1829	(aptamer and "gene expression") and ligand	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S138	1611	((aptamer and "gene expression") and ligand) and translation$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S139	1566	(((aptamer and "gene expression") and ligand) and translation$) and (activat$ or repress$)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S140	1511	aptamer SAME ligand	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S141	1042	(aptamer SAME ligand) and translation$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S142	993	(aptamer SAME ligand) and "gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S143	900	((aptamer SAME ligand) and "gene expression") and translation$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S144	1464	Hoechst with "33258"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41

S145	23	(Hoechst with "33258") and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S146	765	"molecular switch"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S147	15	"molecular switch" and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S148	37404	transcript$ SAME (activat$ or repress$)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S149	100	aptamer SAME (transcript$ SAME (activat$ or repress$))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S150	752	aptamer and (e2f-1 or gal4 or stat or "Zinc finger")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S151	154	aptamer and (tup1 or sir1 or nep1 or tsf3 or sfI or sf1 or wt1 or e4bp4 or krab or zf5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S152	1801	aptamer SAME binding	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S153	82	(aptamer SAME binding) SAME (transcript$ SAME (activat$ or repress$))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S154	2407	TAM.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S155	7	TAM.in. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S156	8881	inhibit WITH translation	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S157	62	(inhibit WITH translation) SAME aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S158	0	"choo.in"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S159	2001	choo.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S160	4	choo.in. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S161	15156	green.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S162	13	green.in. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S163	116	canji.as.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S164	5	canji.as. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S165	24114	"transcription factor"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S166	31167	transcription WITH regulat$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S167	8735	(transcription WITH regulat$) SAME "gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S168	5934	((transcription WITH regulat$) SAME "gene expression") and "transcription factor"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S169	10613	"transcription factor" WITH regulat$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S170	50051	DNA WITH binding	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S171	7525	("transcription factor" WITH regulat$) and (DNA WITH binding)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S172	3118	("transcription factor" WITH regulat$) SAME (DNA WITH binding)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S173	419	(("transcription factor" WITH regulat$) SAME (DNA WITH binding)) and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S174	52815	("small molecule" or ligand)WITH binding	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S175	392	((("transcription factor" WITH regulat$) SAME (DNA WITH binding)) and aptamer) and (("small molecule" or ligand)WITH binding)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S176	635	"transcription regulatory" WITH protein	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S177	3	((((("transcription factor" WITH regulat$) SAME (DNA WITH binding)) and aptamer) and (("small molecule" or ligand)WITH binding)) and ("transcription regulatory" WITH protein)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S178	15254	inhibit$ WITH translation	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S179	337	((((("transcription factor" WITH regulat$) SAME (DNA WITH binding)) and aptamer) and (("small molecule" or ligand)WITH binding)) and (inhibit$ WITH translation)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S180	64	("transcription regulatory" WITH protein) SAME "gene expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S18 1	43897	|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 2	1378	|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 3	1137	(|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer) and translation	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 4	752	((|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 5	691	((((|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)) and ligand	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 6	637	(((((|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)) and ligand) and (DNA WITH binding)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S18 7	591	((((((|536/23.1|536/23.4|536/24. 1|536/24.5|536/24.33|435/320. 1|435/325|435/252.3|435/254. 11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)) and ligand) and (DNA WITH binding)) and (("small molecule" or ligand)WITH binding)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S188	444	((((((|536/23.1|536/23.4|536/24.1|536/24.5|536/24.33|435/320.1|435/325|435/252.3|435/254.11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)) and ligand) and (DNA WITH binding)) and (("small molecule" or ligand)WITH binding)) and ((transcription WITH regulat$) SAME "gene expression")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S189	251	(((((((|536/23.1|536/23.4|536/24.1|536/24.5|536/24.33|435/320.1|435/325|435/252.3|435/254.11|435/419|435/254.2|.ccls. and aptamer) and translation) and (transcription WITH regulat$)) and ligand) and (DNA WITH binding)) and (("small molecule" or ligand)WITH binding)) and ((transcription WITH regulat$) SAME "gene expression")) and ((("transcription factor" WITH regulat$) SAME (DNA WITH binding)) and aptamer)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S190	0	"transcription regultion"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S191	1043	"transcription regulation"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S192	2834	"transcription activator" or "transcription repressor" or "transcription regulator"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S193	23	"transcription regulation" SAME ("transcription activator" or "transcription repressor" or "transcription regulator")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S194	225	"transcription regulation" and p53	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S195	45	("transcription regulation" and p53) and ("transcription activator" or "transcription repressor" or "transcription regulator")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S196	7833	repress$ WITH transcription	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41

S197	285	"transcription regulation" and (repress$ WITH transcription)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S198	28138	v-erbA or "retinoic acid receptor" or "thyroid hormone receptor" or ssn6 or tup1 or sir1 or nep1 or tsf3 or sfi or wt1 or "oct-2.1" or e4bp4 or krab or zf5 or e2f-1 or fal4 or stat or "zinc finger" or "tet operon" or "tetracycline repressor"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/25 11:41
S199	7929	transcription with (activator or repressor or cofactor)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S200	88831	transcription	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:41
S201	16084	(regulatory protein) with transcription	USPAT	OR	OFF	2005/04/25 11:41
S202	2356	((regulatory protein) with transcription) and (v-erbA or "retinoic acid receptor" or "thyroid hormone receptor" or ssn6 or tup1 or sir1 or nep1 or tsf3 or sfi or wt1 or "oct-2.1" or e4bp4 or krab or zf5 or e2f-1 or fal4 or stat or "zinc finger" or "tet operon" or "tetracycline repressor")	USPAT	OR	OFF	2005/04/25 11:41
S203	770	(((regulatory protein) with transcription) and (v-erbA or "retinoic acid receptor" or "thyroid hormone receptor" or ssn6 or tup1 or sir1 or nep1 or tsf3 or sfi or wt1 or "oct-2.1" or e4bp4 or krab or zf5 or e2f-1 or fal4 or stat or "zinc finger" or "tet operon" or "tetracycline repressor")) and (transcription with (activator or repressor or cofactor))	USPAT	OR	OFF	2005/04/25 11:41
S204	50	((((regulatory protein) with transcription) and (v-erbA or "retinoic acid receptor" or "thyroid hormone receptor" or ssn6 or tup1 or sir1 or nep1 or tsf3 or sfi or wt1 or "oct-2.1" or e4bp4 or krab or zf5 or e2f-1 or fal4 or stat or "zinc finger" or "tet operon" or "tetracycline repressor")) and (transcription with (activator or repressor or cofactor))) and "transcription regulation"	USPAT	OR	OFF	2005/04/25 11:41

S205	1	"5968793".pn.	USPAT	OR	OFF	2005/04/25 11:41
S206	4	green.in. and werstuck.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/25 11:53

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Annu Rev Microbiol. 2004;58:303-28. Review.
PMID: 15487940 [PubMed - indexed for MEDLINE]

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Temperature sensing by the dsrA promoter.
J Bacteriol. 2003 Nov;185(22):6609-14.
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Coupled degradation of a small regulatory RNA and its mRNA targets in Escherichia coli.
Genes Dev. 2003 Oct 1;17(19):2374-83. Epub 2003 Sep 15.
PMID: 12975324 [PubMed - indexed for MEDLINE]

4: Repoila F, Majdalani N, Gottesman S. Related Articles, Links

Small non-coding RNAs, co-ordinators of adaptation processes in Escherichia coli: the RpoS paradigm.
Mol Microbiol. 2003 May;48(4):855-61. Review.
PMID: 12753181 [PubMed - indexed for MEDLINE]

5: Majdalani N, Hernandez D, Gottesman S. Related Articles, Links

Regulation and mode of action of the second small RNA activator of RpoS translation, RprA.
Mol Microbiol. 2002 Nov;46(3):813-26.
PMID: 12410838 [PubMed - indexed for MEDLINE]

6: Repoila F, Gottesman S. Related Articles, Links

Signal transduction cascade for regulation of RpoS: temperature regulation of DsrA.
J Bacteriol. 2001 Jul;183(13):4012-23.
PMID: 11395466 [PubMed - indexed for MEDLINE]

7: Majdalani N, Chen S, Murrow J, St John K, Gottesman S. Related Articles, Links

Regulation of RpoS by a novel small RNA: the characterization of RprA.
Mol Microbiol. 2001 Mar;39(5):1382-94.
PMID: 11251852 [PubMed - indexed for MEDLINE]

8: Majdalani N, Cunning C, Sledjeski D, Elliott T, Gottesman S. Related Articles, Links

DsrA RNA regulates translation of RpoS message by an anti-antisense mechanism, independent of its action as an antisilencer of transcription.
Proc Natl Acad Sci U S A. 1998 Oct 13;95(21):12462-7.
PMID: 9770508 [PubMed - indexed for MEDLINE]

☐ **9:** Sledjeski DD, Gupta A, Gottesman S. Related Articles, Links

The small RNA, DsrA, is essential for the low temperature expression of RpoS during exponential growth in Escherichia coli.
EMBO J. 1996 Aug 1;15(15):3993-4000.
PMID: 8670904 [PubMed - indexed for MEDLINE]

☐ **10:** Sledjeski D, Gottesman S. Related Articles, Links

A small RNA acts as an antisilencer of the H-NS-silenced rcsA gene of Escherichia coli.
Proc Natl Acad Sci U S A. 1995 Mar 14;92(6):2003-7.
PMID: 7534408 [PubMed - indexed for MEDLINE]

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